TECHNICAL SHEET





Article: B1711B AMSTERDAM

Norm: EN ISO 20345:2022

Safety Class: S3S ESD CI LG FO SR

Sole	S70 BLACK ORANGE
Weight, size 42:	568 g
Footwear height:	90
Width:	11,5
Construction / Sole:	STROBEL; ESD AirTech/Tpu-Skin injected outsole
Anti-perforation insert	Fresh'n Flex Plus Super Light (PS)
Insole:	
Footbed supplied:	Dry'n Air Omnia Comfort Cube
Other usable Footbeds (certified):	Dry'n Air Omnia ESD; Dry'n Air Scan&Fit Omnia; Dry'n Air Omnia ESD Weareco; Secosol; Secosol Dynamic
ESD Protection for electronic devices	CEI EN 61340-4-3:2018; CEI EN 61340-4-5:2018; CEI EN 61340-5-1:2016

ESD Protection (Electrostatic discharges) for electronic devices

Suitable for use in EPA areas (Electrostatic discharges protected area)

Component	Description	Value	Minimum Requirement	Norm
ESD Footwear	Sole electrical ground resistance (resistance of the whole worn footwear / metal floor)	3,11 x $10^7\Omega$	< 1,00 x $10^9\Omega$	CEI EN 61340-5-1
	Sole electrical transversal resistance (footwear resistance)	6,23 x $10^6\Omega$	≤ 1,00 x 10^8 Ω	CEI EN 61340-5-1
	Chargeability	67,28 V	< 100 V	CEI EN 61340-5-1

Entire footwear: protections

Component	Description	Value	Minimum Requirement	Norm
SlimCap toe-cap	Impact Resistance (200J)	16,5 mm	≥ 14,0 mm	5.3.2.3
	Compression Resistance (15 kN)	20,0 mm	≥14,0 mm	5.3.2.4
Outsole (SR)	Slip Resistance 20345:2022			
	•Ceramic + Det. - Heel	0.38	≥ 0.31	5.3.5.2
	•Ceramic + Det. + Forepart	0.42	≥ 0,36	5.3.5.2
	•Ceramic + Glycerin (SR) - Heel	0,24	≥ 0,19	6.2.10.1
	•Ceramic + Glycerin (SR) - Forepart	0,28	≥ 0,22	6.2.10.1
Fresh'n Flex Plus Super Light (PS)	Puncture resistance. 20345:2022	1380 N	Average value ≥1100N; Single value ≥950N	6.2.1.1.4
Footwear with insole (A)	Antistatic properties			
	Electrical resistance	wet 40,5 MΩ - dry 7,98 MΩ	0,1 ÷ 1000 MΩ	6.2.2.2
Thermal insulation	Thermal insulation			
	• Insole Temp. Increase (HI)	N/A	≤ 22 °C	6.2.3.1
	• Decreased Insole Temp. (CI)	7,0 °C	≤ 10°C	6.2.3.2
Energy absorption (E)	Shock-absorption in the heel region	31 J	≥ 20 J	6.2.4

Upper

Materials	Description	Value	Minimum Requirement	Norm
Full grain waxy leather water resistant	Tear Strenght	216 N	≥ 120 N	5.4.3
	Tensile Strenght	N/A	≥ 15 N/mm²	5.4.4
	Water vapour permeability	1,8 mg/cm² h	≥ 0,8 mg/cm² h	5.4.6
	Water vapour coefficient	17,4 mg/cm²	≥ 15mg/cm²	5.4.6
	Chromium VI content (if leather)	Not detectable	Not detectable	6.11
	Water passed	0,0 g	≤ 0,2 g	6.3
	Water absorption	21 %	≤ 30%	6.3

Lining

Materials	Description	Value	Minimum Requirement	Norm
Hi-tech 3D fabric	Tear Strenght	51 N	≥ 15 N	5.5.1
	Abrasion resistance	• No dry hole	No holes before 51,200 cycles	5.5.2
		• No hole in humid environment	No holes before 25,600 cycles	5.5.2
	Water steam permeability	80,1 mg/cm² h	≥ 2,0 mg/cm² h	5.5.3
	Chromium VI content (if leather)	N/A	Not detectable	5.5.5

Sole

Materials	Description	Value	Minimum Requirement	Norm
AirTech et Tpu Skin ESD Anti-Fatigue Sole	Cleat height	4,0 mm	≥ 2,5 mm	5.8.1.3
	Tear Strenght	11,4 kN/m	≥ 8 kN/m	5.8.2
	Abrasion resistance	169 mm³	≤ 250 mm³	5.8.3
	Flexural resistance after 30,000 cycles	2 mm	≤ 4,0 mm	5.8.4
	Flexural resistance after 150,000 cycles (hydrolysis)	3,5 mm	≤ 6,0 mm	5.8.5
	Upper/outsole bond strenght	N/A	> 4 N/mm; ≥ 3 N/mm with sole tear*	5.8.6
	Hydrocarbon resistance FO (volume change)	4 %	≤ 12%	6.4.2
AirTech et Tpu Skin ESD Anti-Fatigue Sole	(LG) Geometrical Prescriptions 20345:2022	According	According	6.4.3

Issued by: Innovation Director Ing. Cataldo De Luca **Signature**

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